

# FUEL SYSTEM

## SERVICE INSTRUCTION WORKSHEET

TO REPAIR

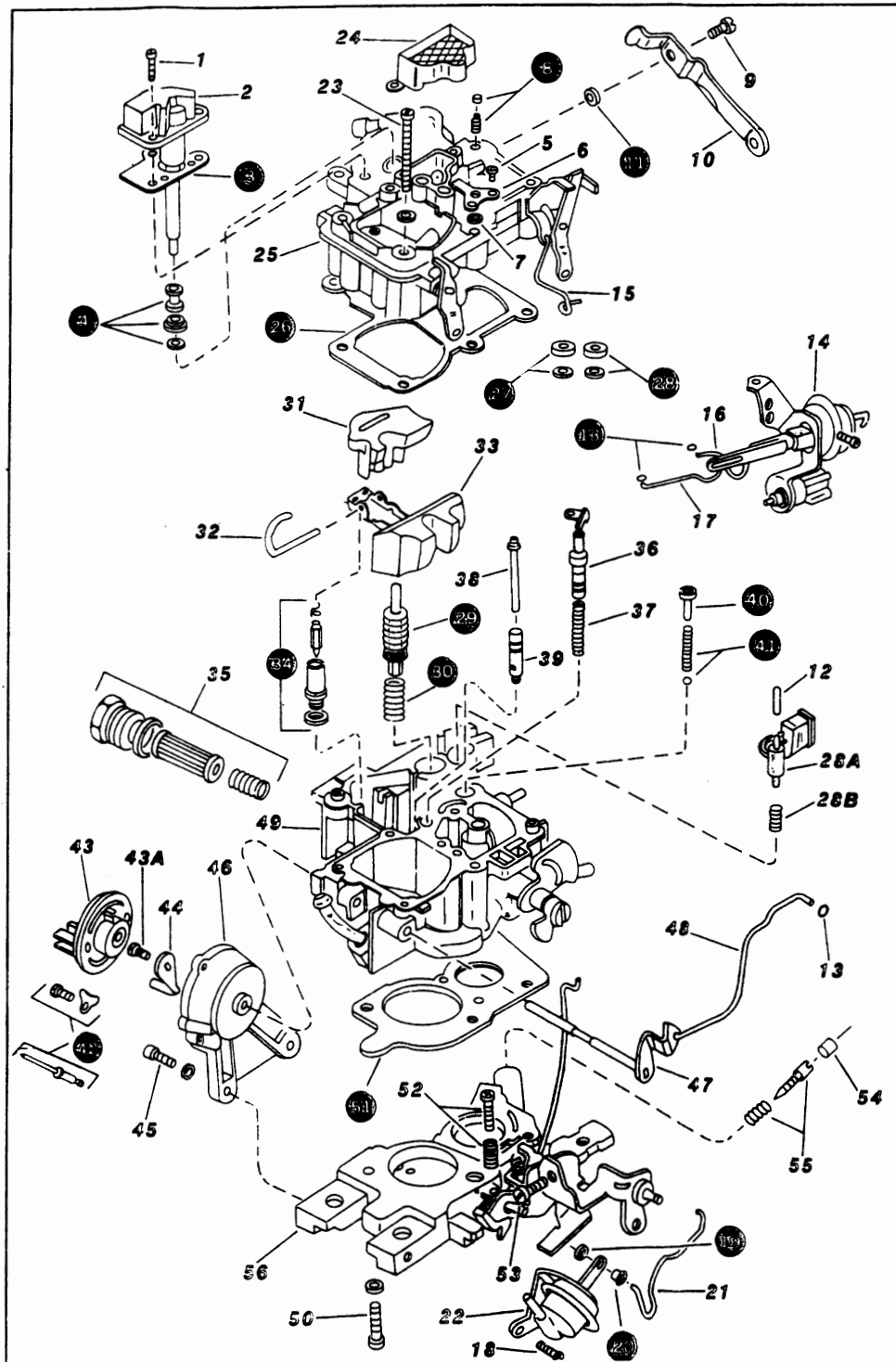
ROCHESTER CARBURETOR

2 BARREL — Model 2SE, E2SE

1. Carefully read the text in the following pages to become familiar with the contents of this worksheet before performing carburetor overhaul.
2. The exploded view shown is typical of the model carburetor this kit will service. The view may differ slightly from the actual carburetor being overhauled.

3. Use the exploded view as a guide. The numerical sequence may generally be followed to disassemble the carburetor far enough to permit cleaning and inspection.
4. Parts list shown DOES NOT reflect the contents of the kit.
5. Kit may contain extra parts intended for other carburetors within this group. Substitute identical replacement parts for original worn parts found in carburetor.

## TYPICAL ILLUSTRATION



## CLEANING

Cleaning must be done with carburetor disassembled. Cover opening on intake manifold after carburetor is removed. Soak parts in cleaning solvent long enough to soften foreign matter.  
**Caution:** Do not soak parts made of rubber, leather, plastic or electrical parts. Do not use abrasives. Do not use a metal wire to clean out passageways and jets. Wash off in suitable solvent. Clear all passageways with compressed air.

## PARTS LIST

1. Screw, Mixture Control Solenoid •
2. Solenoid, Mixture Control •
3. Gasket, Mixture Control Solenoid •
4. Adapter, Seal & Retainer •
5. Screw, Hot Idle Compensator
6. Hot Idle Compensator
7. Seat, Hot Idle Compensator
8. Plug & Adjusting Screw, T.P.S. •  
(Screw not included in kit)
9. Screw, Pump Lever
10. Lever, Accelerator Pump
11. Spacer, Pump Lever
12. Pin, Plunger, T.P.S. •
13. Clip, Rod (2)
14. Vacuum Break, Primary
15. Rod, Fast Idle Cam
16. Rod, Vacuum Break, Primary
17. Rod, Air Valve
18. Screw, Vacuum Break, Secondary (2) •
19. Retainer, Vac. Break Rod •
20. Bushing, Vac. Break Rod •
21. Rod, Vacuum Break
22. Vacuum Break, Secondary •
23. Screw, Air Horn<sup>12</sup> (3 short, 4 long)
24. Stack, Vent
25. Air Horn Assy.
26. Gasket, Air Horn
27. Seal & Retainer, Pump Stem
28. Seal & Retainer, T.P.S. •
- 28A. Sensor, Throttle Positioner •
- 28B. Spring, Tension, T.P.S. •
29. Pump Assembly
30. Spring, Pump Return
31. Insert, Float Bowl
32. Retainer Rod, Float
33. Float
34. Needle, Seat & Gasket Assy.
35. Fuel Fitting, Gasket & Filter Assy.
36. Power Piston
37. Spring, Power Piston
38. Rod, Primary Metering
39. Jet, Primary
40. Guide, Pump Discharge
41. Ball & Spring, Pump Discharge
42. Screw or Rivet & Retainer, Choke Cover
43. Cover, Choke Stat
- 43A. Screw, Choke Lever
44. Lever, Choke Stat
45. Screw, Choke Housing
46. Housing, Choke
47. Shaft & Lever, Intermediate Choke
48. Rod, Intermediate Choke
49. Main Body
50. Screw, Throttle Body to Main Body
51. Gasket, Main Body to Throttle Body
52. Screw & Spring, Idle Speed
53. Screw, Fast Idle Cam
54. Plug, Hardened Steel<sup>13</sup>
55. Screw & Spring Idle Mixture<sup>13</sup>
56. Throttle Body

• Some Models

NOTE: Circled parts are included in most kits. Extra parts are included for other kits.

➤ PARTS LIST SHOWN DOES NOT REFLECT THE CONTENTS OF THE KIT.

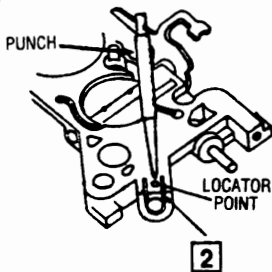
## REMOVAL & INSTALLATION NOTES

1. Cover intake manifold after carburetor is removed.
2. Fast idle cam and screw are not removable.
3. When removing pump discharge guide (40), pull straight out. Do not pry out as damage to casting may occur.
4. Unhook fast idle cam rod (15) when removing air horn assembly.
5. Choke cover (43) is held by pop rivets. See Figure 14 if removal becomes necessary.
6. Linkage connected to vacuum break unit can be removed at one end only.
7. Refer to Figure 1 for removal of idle mixture screw (55).
8. Install parts and components in reverse order of removal.
9. Refer to Figure 2 for proper installation of needle valve (34).
10. When installing seal retainers (27, 28), lightly stake in three places.
11. Follow this procedure when installing adapter, seal and retainer (4): Install adapter and seal onto solenoid stem, then carefully drive retainer on stem using a 3/16" socket and light hammer. Leave slight clearance for seal expansion.
12. Coat seal (4), pump stem (29), and T.P.S. plunger (12) with light oil prior to installation in carburetor.
13. Follow service manual for final setting of mixture control.

**FIG. 1  
IDLE MIXTURE SCREW PLUG REMOVAL**

**NOTE:** Do not remove plugs unless it's necessary to replace idle mixture screw or idle mixture passages are clogged.

1. Place throttle body on bench, manifold side up.
2. Make two parallel cuts as shown on either side of the locator point using a hacksaw. The cuts should reach down to the steel plug but should not extend more than 1/8" beyond the locator point.
3. With throttle body supported, place a flat punch near the locator point, hold it at 45° angle and drive it into the throttle body until the casting breaks away, exposing the steel plug.
4. Hold a center punch vertical and drive it into the steel plug (hardened plug will break). Remove pieces to expose idle mixture screw.

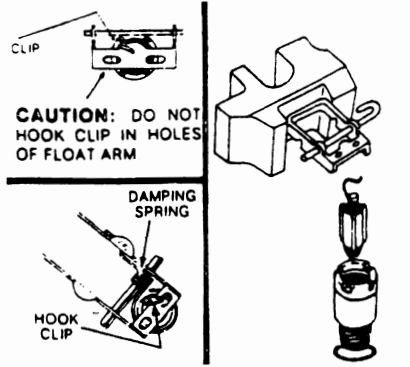


**FIG. 2  
FLOAT NEEDLE & CLIP LOCATION**

**NOTE:** Hook clip over edge of flat on float arm in opposite direction of pontoon (as shown).

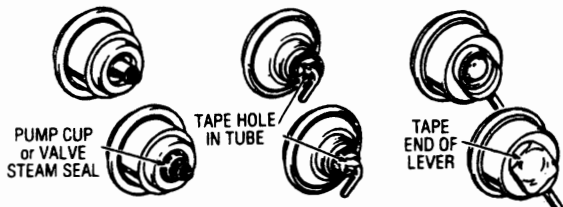
**EXCEPTION:**

Where a damping spring is used, the clip may be hooked through one of the holes of float arm as shown.

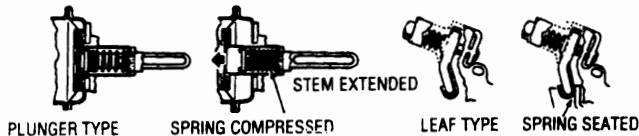


**FIG. 3  
VACUUM BREAK ADJUSTMENT INFORMATION**

**PLUGGING AIR BLEED HOLES**

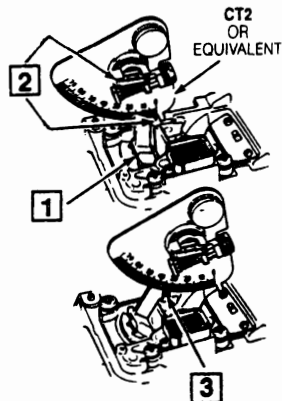


**BUCKING SPRINGS**



**FIG. 4  
CHOKE VALVE ANGLE GAUGE**

1. Place angle gauge magnet on closed choke valve.
2. Rotate degree scale to bring the zero mark opposite the pointer, and center the leveling bubble.
3. Rotate scale to specified angle, and open choke valve as described in adjustment steps.
4. Adjust linkage as described in adjustment steps if bubble is not in the center.



## ADJUSTMENT DATA

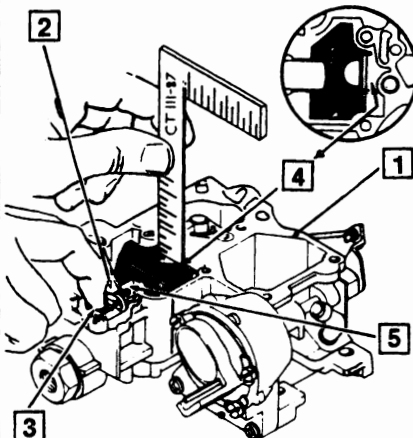
**FIG. 5  
FLOAT LEVEL ADJUSTMENT**

1. Remove gasket.
2. Hold float hinge pin firmly in place.
3. Lightly push float down against needle.

**CAUTION:** Do not allow needle to be compressed into seat as incorrect setting will result.

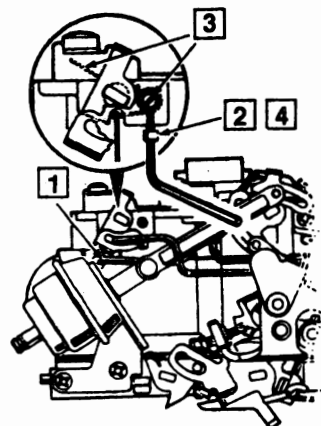
4. Measure as specified from top of casting to top of float at point furthest away from float hinge.
5. To adjust, remove float and bend float arm as needed.

**NOTE:** After adjustment, check float alignment.



**FIG. 6  
AIR VALVE SPRING ADJUSTMENT**

1. Remove intermediate choke link (only if necessary) to gain access to lock screw.
2. Loosen lockscrew using 3/32" hex wrench.
3. Turn tension-adjusting screw clockwise until air valve opens slightly. Then, turn adjusting screw counter-clockwise until air valve just closes, then keep turning in this direction number of turns specified.
4. Tighten lockscrew. Lubricate pin and spring contact area.



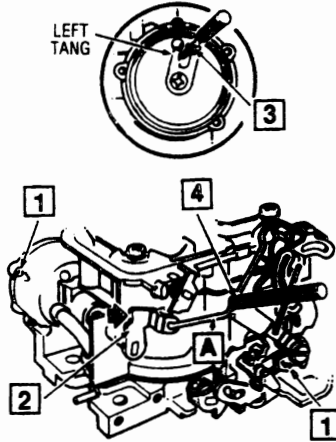
## ADJUSTMENT DATA (Cont'd)

**FIG. 7**  
**CHOKE STAT LEVER**  
**ADJUSTMENT**  
(one or two tang)

1. Remove thermostatic cover from choke housing and place fast idle screw on high step of cam.

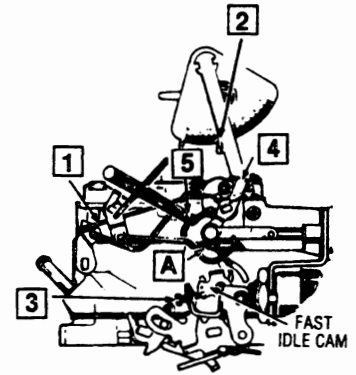
**NOTE:** Drill rivets out if cover is riveted.

2. Push intermediate choke lever to close choke valve.
3. Insert .085" gauge or drill bit into hole in choke housing as shown. Gauge should just contact left tang.
4. To adjust, bend intermediate choke link where shown. (Support link at point 'A'.)



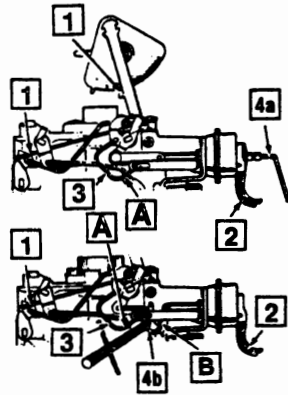
**FIG. 8**  
**CHOKE LINK - FAST IDLE**  
**CAM ADJUSTMENT**

1. Attach rubber band to intermediate choke lever and open throttle valve to allow choke valve to close.
2. Set up angle gauge (see Fig. 4) and set to specified angle.
3. Place fast idle screw on second step against rise of high step.
4. Push on choke shaft lever to open choke valve and to make contact with black closing tang.
5. To center bubble, support fast idle cam link at point 'A' and bend as shown.



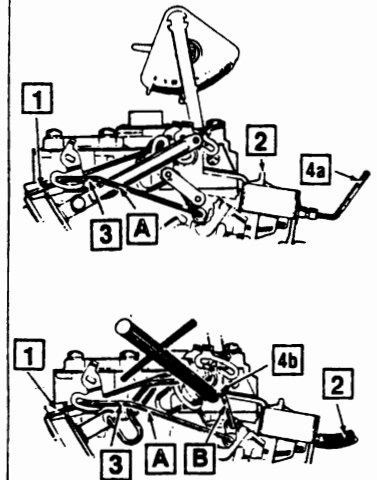
**FIG. 9A**  
**PRIMARY SIDE VACUUM**  
**BREAK ADJUSTMENT**  
(single vacuum break unit)

1. Follow steps 1 and 2, Fig. 8.
2. Fully seat vacuum break plunger using an outside vacuum source. Plug air bleed hole where applicable (see Fig. 3).
3. Be sure air valve link does not restrict full travel of plunger. If necessary, support link at point 'A' and bend as shown. Refer to Fig. 14 for final adjustment of link. Where applicable, plunger stem must be extended fully to compress bucking spring (see Fig. 3).
4. To center bubble, either:
  - a. Adjust with 1/8" hex wrench (vacuum still applied)
  - or —
  - b. Support at point 'B' and bend as shown (vacuum still applied).



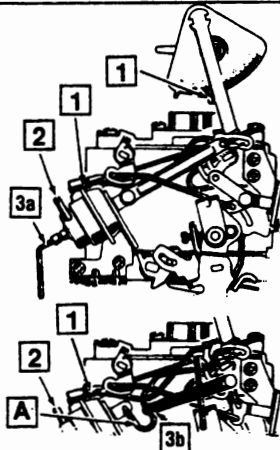
**FIG. 9B**  
**PRIMARY SIDE VACUUM**  
**BREAK ADJUSTMENT**  
(dual vacuum break unit)

1. Follow steps 1 and 2, Fig. 8.
2. Fully seat vacuum break plunger using an outside vacuum source. Plug air bleed hole where applicable (see Fig. 3).
3. Be sure air valve link does not restrict full travel of plunger. If necessary, support link at point 'A' and bend as shown. Refer to Fig. 14 for final adjustment of link. Where applicable, plunger stem must be extended fully to compress bucking spring (see Fig. 3).
4. To center bubble, either:
  - a. Adjust with 1/8" hex wrench (vacuum still applied)
  - or —
  - b. Support at point 'B' and bend as shown (vacuum still applied).



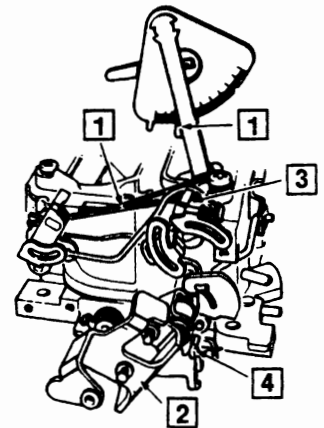
**FIG. 10**  
**SECONDARY SIDE VACUUM**  
**BREAK ADJUSTMENT**

1. Follow steps 1 and 2, Fig. 8.
2. Fully seat vacuum break plunger using an outside vacuum source. Plug air bleed hole where applicable (see Fig. 3). Where applicable, plunger stem must be extended fully to compress bucking spring (see Fig. 3).
3. To center bubble, either:
  - a. Adjust with 1/8" hex wrench (vacuum still applied)
  - or —
  - b. Support at point 'A' and bend as shown (vacuum still applied).



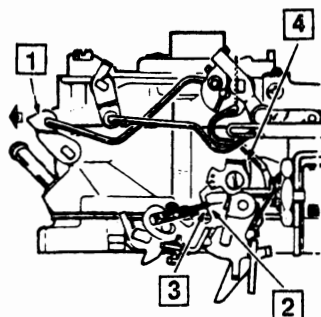
**FIG. 11**  
**UNLOADER**  
**ADJUSTMENT**

1. Follow steps 1 and 2, Fig. 8.
2. Hold throttle lever in wide open position.
3. Push on choke shaft lever to open choke valve and to make contact with black closing tang.
4. If bubble is not centered, adjust by bending tang.



**FIG. 12**  
**SECONDARY LOCKOUT**  
**ADJUSTMENT (typical)**

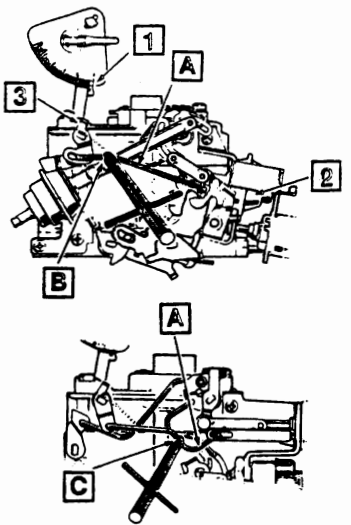
1. Hold choke valve in wide open position by pushing down on intermediate choke lever.
2. Open throttle lever until end of secondary actuating lever is opposite toe of lockout lever.
3. Using a gauge or drill bit check .025" clearance as shown.
4. To adjust, bend lockout lever tang contacting fast idle cam.



## ADJUSTMENT DATA (Cont'd)

**FIG. 13  
AIR VALVE LINK  
ADJUSTMENT**

1. Set up angle gauge on AIR VALVE and set to specified angle.
2. Fully seat vacuum break plunger using an outside vacuum source.
3. Rotate air valve in the direction of open air valve by applying light pressure to air valve lever.
4. To center bubble, support air valve link at point 'A' and bend as shown at points 'B' or 'C'.



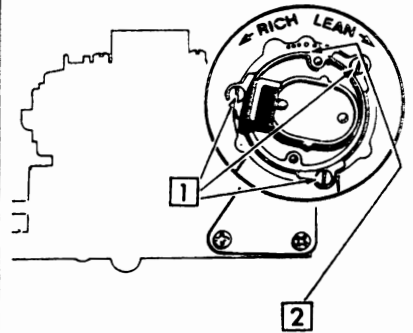
**FIG. 14  
AUTO CHOKE  
ADJUSTMENT**

**NOTE:** Position fast idle screw on high step of fast idle cam.

1. Loosen 3 hold-down screws.

**NOTE:** Some models have chokes which do not require adjustment. However, if disassembly becomes necessary, scribe a reference line from choke cover to housing, then drill out rivets using a # 21 drill (.159"). Reassemble to reference mark using similar rivets or appropriate size sheet metal or self-tapping screws.

2. Position scribe line on electric choke to specified mark on choke housing. Choke valve must be spring-loaded toward closed position.



### SPECIFICATION CHART

Year	Application	Float Level Fig. 5	Air Valve Spring* Fig. 6	Choke Link Fig. 8	Vacuum Break		Unloader Fig. 12	Air Valve Link Fig. 14	Auto Choke Fig. 15	
					Primary Fig. 9	Secondary Fig. 11				
<b>BUICK, CHEVROLET, OLDSMOBILE, PONTIAC — SPECIFICATION I.D.-A</b>										
1986-84	2.8L Eng. -U.S.	5/32 <sup>1</sup>	1/2	28°	25°	35°	45°	1°	—	
<b>GM TRUCKS —</b>										
1985	2.8L Eng. -Cal.	9/32	1	22°	25°	30°	30°	1°	—	
<b>GM TRUCKS — SPECIFICATION I.D.-B</b>										
1985	2.8L Eng. -Exc. Cal. -Carb. Nos. 17085351, 363 -Carb. Nos. 17085355, 367	11/32 11/32	1 1	22° 22°	32° 30°	36° 34°	40° 40°	1° 1°	— —	
1984	2.8L Eng. -Exc. Cal. -Carb. Nos. 17084348, 349, 350, 351 -Carb. Nos. 17084352, 353, 354, 355	11/32 11/32	1 1	22° 22°	30° 30°	32° 35°	40° 40°	1° 1°	— —	
<b>AMC, JEEP — SPECIFICATION I.D.-C</b>										
1985-82	2.5L (151) Eng. -Exc. Cal.	7/32 <sup>2</sup>	2	18°	21°	—	34°	1°	—	
1981	2.5L (151) Eng. -Exc. Cal.	7/32 <sup>2</sup>	2	25°	19°	—	34° <sup>4</sup>	1°	—	
1980	2.5L (151) Eng. -Exc. Cal.	7/32	2	18°	20° <sup>5</sup>	—	32°	1°	—	
<b>BUICK, CHEVROLET, OLDSMOBILE, PONTIAC —</b>										
1983	2.5L Eng. -Can. -A/T -Carb. No. 17083461 -M/T -Carb. No. 17083465 -M/T	1/4 <sup>3</sup> 1/4 1/8	1/2 1/2 1/2	18° 18° 18°	19° 18° 20°	— — —	36° 36° 36°	1° 1° 1°	— — —	
1982	2.5L Eng. -Can. -Exc. -Carb. No. 17082469	1/4 <sup>3</sup> 1/4	2 2	18° 18°	21° 16°	— —	36° 36°	1° 1°	— —	
1981-79	Carb. Nos. 17080674, 675, 676, 677 Carb. Nos. 17059614, 616, 618, 620, 622, 624 Carb. Nos. 17059615, 617, 619, 621, 623, 625 Carb. Nos. 17059673, 675, 677 Carb. Nos. 17059674, 676	7/32 3/16 <sup>7</sup> 3/16 <sup>7</sup> 3/16 3/16	2 2 2 — —	18° 18° 18° 18° 18°	19° <sup>6</sup> 17° 19° 21° 19°	— — — — —	32° 36° 36° 32° 32°	1° 1° 1° 2° 2°	— — — 1NR 2NR	
<b>BUICK — SPECIFICATION I.D.-D</b>										
1981	2.5L Eng. -U.S. -Carb. Nos. 17058576, 577, 578	—	—	—	—	—	—	—	—	
<b>GM TRUCKS —</b>										
1985	2.8L Eng. -Cal.	1/8	1	22°	25°	30°	30°	1°	—	
1984	2.8L Eng. -Cal.	1/8	3/4	22°	25°	30°	30°	1°	—	
<b>JEEP —</b>										
1986	2.8L Eng.	1/8	1	22°	25°	30°	—	1°	—	
1985-84	2.8L Eng.	1/8	3/4	22°	21°	30°	—	1°	—	

**FOOTNOTES:**

- \* Number of Turns.
- <sup>1</sup> Carb. Nos. 17084632, 33, 35, 36 set 9/32".
- <sup>2</sup> Non-adjustable.
- <sup>3</sup> Carb. Nos. 17082380, 17081790, 791, 799; 17083464, 466; 17082464, 465, 466 set 1/8".

- <sup>4</sup> Carb. Nos. 17081792, 793 set 32°.
- <sup>5</sup> Carb. No. 17080683 set 19°.
- <sup>6</sup> Carb. No. 17080675, 677 set 21°.
- <sup>7</sup> Carb. No. 17059622, 623, 624, 625 set 5/32".

**ABBREVIATIONS:**

- |                              |                           |
|------------------------------|---------------------------|
| A/T - Automatic Transmission | Exc. - Except             |
| Cal. - California            | M/T - Manual Transmission |
| Can. - Canada                | NR - Notch Rich           |